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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MURATA MANUFACTURING COMPANY, LTD.

C/O KEATING & BENNETT, LLP

1800 Alexander Bell Drive

SUITE 200

Reston, VA 20191

EXAMINER

RUTLAND WALLIS, MICHAEL

ART UNIT

PAPER NUMBER

2836

NOTIFICATION DATE

DELIVERY MODE

09/04/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JKEATING@KBIPLAW.COM

uspto@kbiplaw.com

cbennett@kbiplaw.com

Office Action Summary

Application No.

10/595,276

Applicant(s)

UNO ET AL.

Examiner

MICHAEL RUTLAND WALLIS

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 04 April 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-29 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 12-29 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 04 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-850)
Paper No(s)/Mail Date 4/4/06; 6/21/07; 1/16/09
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-14, 18 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Koichi et al. (JP Pub. No. 08-191569)

With respect to claim 12 Koichi teaches a power-supply unit comprising: a main power-supply circuit (item 4A) and a secondary power-supply circuit (item 4B), both connected to an alternating current power supply (item 1); and an input current control circuit (item 3) provided in the main power-supply circuit; wherein the input current control circuit controls an input current supplied to the main power-supply circuit such that harmonic current is suppressed (paragraph 0022) in a current of a summation (described in for example paragraph 0007) of the input current supplied to the main power-supply circuit and an input current supplied to the secondary power-supply circuit.

With respect to claim 13 Koichi teaches a power-supply unit comprising: a main power-supply circuit (item 4A) and a secondary power-supply circuit (item 4B), both connected to an alternating current power supply (item 1); and an input current control

circuit (item 3) provided in the main power-supply circuit; wherein the input current control circuit controls an input current supplied to the main power-supply circuit such that a current of a summation (described in for example paragraph 0007) of the input current supplied to the main power-supply circuit and an input current supplied to the secondary power-supply circuit is substantially proportional (see approximate paragraph 0007) to an input voltage supplied to the input current control circuit.

With respect to claims 14, 18 and 22 Koichi teaches a power-supply unit comprising: a main power-supply circuit (item 4A) and a secondary power-supply circuit (item 4B), both connected to an alternating current power supply (item 1); an input current control circuit (item 3) provided in the main power-supply circuit; and a circuit current detection element (item 14) provided in the input current control circuit; wherein a current of a summation (paragraph 0021) of an input current (I1) supplied to the main power-supply circuit and an input current (I2) supplied to the secondary power-supply circuit flows in the circuit current detection element; and the input current control circuit controls the input current supplied to the main power-supply circuit such that harmonic current is suppressed (paragraph 0022) in the current flowing in the circuit current detection element.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15, 17 and 19-21, 23 and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koichi et al. (JP Pub. No. 08-191569)

With respect to claim 15, 17, 23 and 25-26 Koichi teaches further comprising: a first rectifying circuit (item 2) connected between the alternating current power supply (1) and the input current control circuit, the first rectifying circuit provided in the main power-supply circuit; a second rectifying circuit connected to the alternating current power supply, the second rectifying circuit (item 18B) provided in the secondary power-supply circuit; and a smoothing circuit (item 20) connected to the output of the second rectifying circuit, the smoothing circuit provided in the second power-supply circuit. Koichi does cite the first rectifying circuit to be in the main power supply. It would have been obvious to one of ordinary skill in the art at the time of the invention to consider the first rectifying circuit of Koichi to be part of the main power supply circuitry as it provides the power input to the main power supply circuit in order to increase modularity of the system.

With respect to claim 19 and 27 Koichi teaches wherein the boost converter includes an inductance element (item 9), one terminal of the inductance element is connected to one output terminal of the first rectifying circuit, a diode (item 11) connected between the other terminal of the inductance element and an output terminal of the main power-supply circuit, a switch element (items 15 and 16) connected between the other terminal of the inductance element and the other output

terminal of the first rectifying circuit, and a smoothing capacitor (item 10) connected between an output terminal of the main power-supply circuit and the other output terminal of the first rectifying circuit.

With respect to claim 20 and 28 Koichi teaches the input current control circuit is a converter, however does not cite the converter is a flyback converter. The use of flyback converters are a well known type of converter and known alternative to a boost converter. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Koichi to use a flyback converter in the place of the boost converter in order to provide more accurately controlled power and voltage regulation.

With respect to claim 21 and 29 Koichi teaches the internal structure of the converter it would have been obvious to arrange the inner circuitry of the converter to a typical configuration of a flyback converter in order output a controlled voltage.

Claim 16 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koichi et al. (JP Pub. No. 08-191569) in view of Takahashi (JP Pub. No. 2003-018842) Koichi teaches a power-supply arrangement of claim 15, however does not teach the further limitation of a switch connected between the alternating current power supply and the first rectifying circuit. Takahashi teaches a switch (see drawings 1 and 2) connected between the alternating current power supply and the first rectifying circuit. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Koichi to implement a switch as seen in Koichi in order to allow of the disconnection of circuitry not in use.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Rutland-Wallis whose telephone number is 571-272-5921. The examiner can normally be reached on Monday-Thursday 7:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jared Fureman can be reached on 571-272-2391. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MRW

/Albert W Paladini/
Primary Examiner, Art Unit 2836

8/31/09